The Winter Site (AkHb-2): a Late Archaic Campsite near Guelph, Ontario

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*Late Archaic artifacts from a test **excavation** at **the** Winter Site, near Ospringe, Ontario, show typological affinities with those of **the Lamoka Phase** of central and western New York, **and** those of **the** Mclntyre Site near Rice Lake. The Winter Site appears to **have been located** to take advantage of areas of deer habitat. The appearance of a Lamoka-related Archaic culture in this area may have been due to the expansion of habitat suitable for deer ca. 5000-4000 B.P.*

Introduction

The Winter Site was first recorded by Dr. William M. Hurley in 1968 during a survey of southwestern Ontario. Mr. William Fitzgerald brought the site to my attention in 1986 after he had noticed dark areas in the ploughed field. I visited the site and noted Archaic projectile points in the landowner's collection, and chert detritus on the surface of the site, seemingly restricted to a dark soil discolouration, twenty metres across. As a result, in June of 1987 I conducted test excavations at the site.

Site location and description

The Winter Site is located on the south bank of a small tributary of Lutteral Creek which flows into the Speed River 3.3 kilometres west-southwest of Ospringe in Wellington County (Fig. 1, 2). Topographically, the area is a drumlinized till plain, and the site's soil is a clay-loam typical of the area. The site itself is on the flood plain of the stream where it winds through a saddle between two drumlins (Fig. 2). Much of the stream's valley is broad and swampy, and the stream itself is reported to have supported a viable fish population until a few decades ago.

1987 field work

The initial visit to the site in 1986 showed the presence of two dark brown soil discolourations, each approximately twenty metres in diameter, in a ploughed field on the south side of the stream. A sparse scatter of lithic detritus occurred within one of these areas, suggesting that it was a cultural rather than a natural feature. No ash, charcoal or bone fragments were noted on the surface, and I presumed that the discolouration was due to humic enrichment and increased moisture content resulting from the accumulation of organic debris associated with a human occupation.

One of the discoloured areas was selected for testing in June of 1987 on the basis of its denser surface scatter of lithic detritus. Testing of the site consisted of shovelling twenty square metres of plough zone and screening the soil through quarter-inch mesh. The twenty one-metre squares were dug near the centre of the dark soil area. The subsoil was trowelled and examined for cultural features, which were excavated by trowel.

Four pit features and five post molds were recorded in the subsoil (Fig. 3). The attributes of the pits are summarized in Table 1, and the pits are illustrated in Fig. 4.

Artifacts

The assemblage recovered by the Winter Site test excavation is listed in Table 2.

The raw material of most of the lithic artifacts consists of varieties of Onondaga chert, as determined by visual identification (Table 3). The next most common category consists of varieties of cream-coloured chert that appear to have been procured locally in glacial till. This material appears to have been worked on the site, but no artifacts made of it were recovered. Several other types of chert, not identifiable by visual inspection, make up the next category. These were probably also locally obtained. Items of quartz and quartzite are present in small quantities.

Of the six projectile points or point fragments from the Winter Site (Fig. 5), three are classifiable as Lamoka points on the basis of Ritchie's (1961) description (Fig. 5:a,b,c). A fourth biface (Fig. 5:d) may be an unfinished Lamoka point, to judge from its morphological and metrical similarities to Ritchie's artifacts, and to one of the other Winter

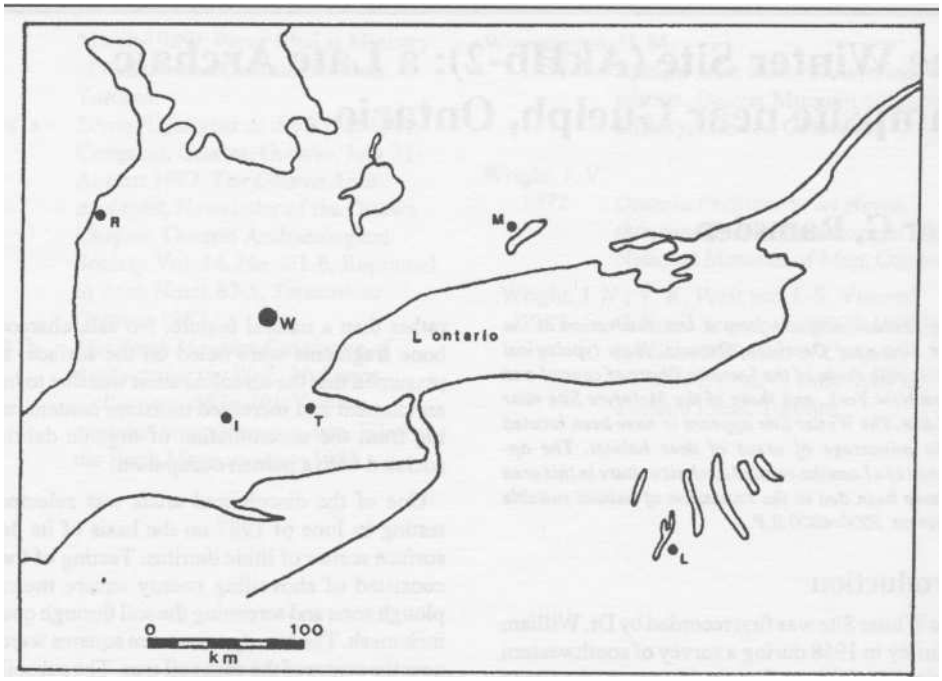

FIGURE 1

Location of the Winter Site and other sites mentioned in the text. I=Inns; L=Lamoka Lake; M=McIntyre; R=Rocky Ridge; T=Thistle Hill; W=Winter.

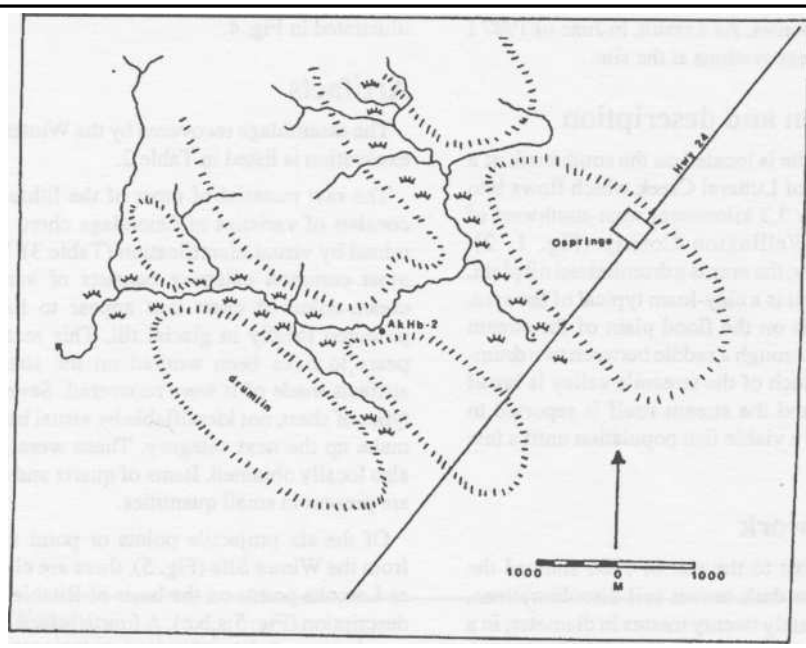

FIGURE 2

Map of the Winter Site and environs.

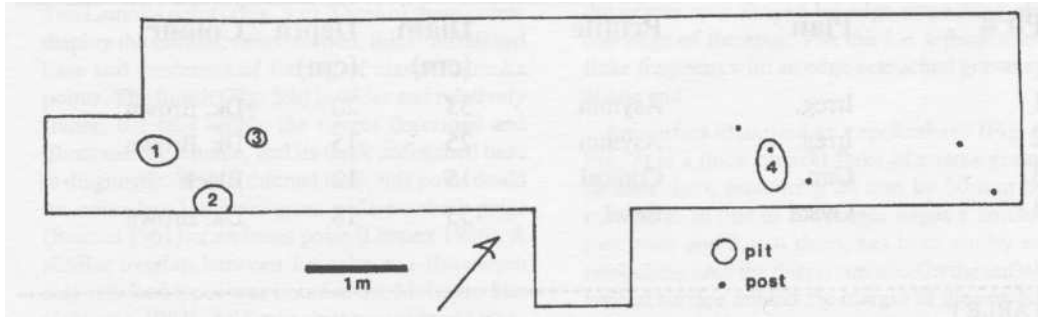

FIGURE 3

Winter Site excavation plan.

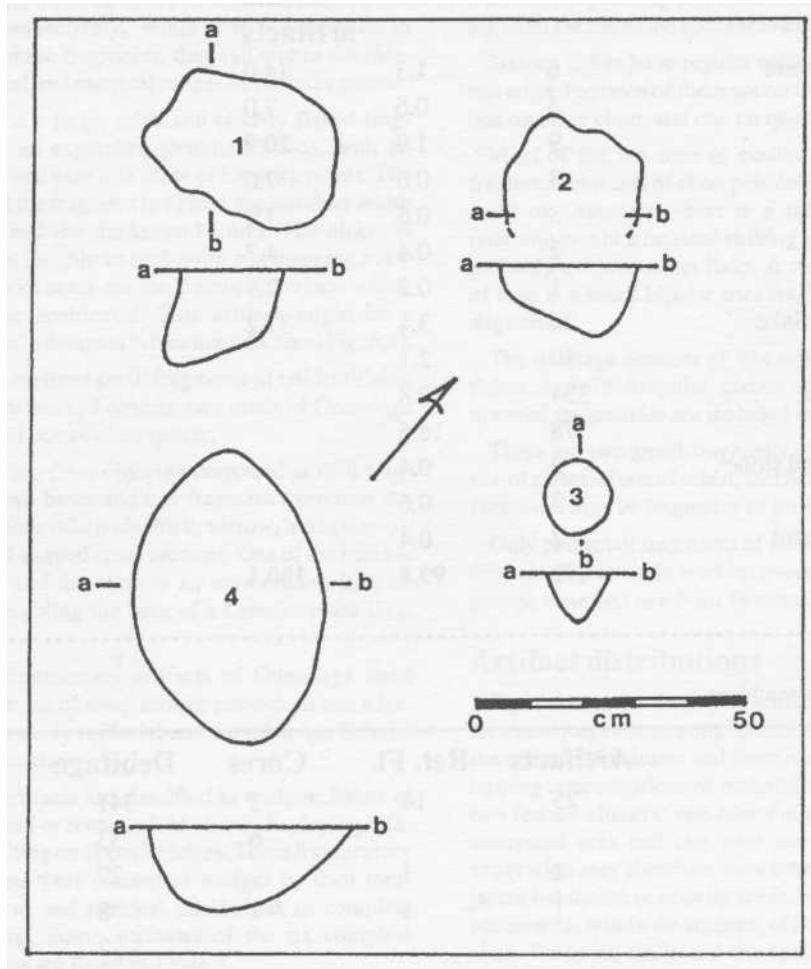

FIGURE 4

Winter Site feature plans and profiles.

Pit #	Plan	Profile	Diam (cm)	Depth (cm)	Colour
1	Irreg.	Asymm.	35	20	Dk. Brown
2	Irreg.	Asymm.	25	15	Dk. Brown
3	Circ.	Conical	15	12	Black
4	Ovate	Bowl	55	18	Dk. Brown

TABLE 1
Winter Site pit data

Class	n	% total	% lithic artifacts
Projectile point	6	1.3	14.0
Drill	3	0.6	7.0
Wedge	9	1.9	20.9
Misc. biface	3	0.6	7.0
Graver	3	0.6	7.0
Scraper	2	0.4	4.7
Spokeshave	1	0.2	2.3
Retouched flake	16	3.4	37.2
Core/nodule	10	2.1	
Waste flake	334	70.8	
Shatter	78	16.5	
Misc. ground stone	2	0.4	
Misc. stone	3	0.6	
Bone fragment	2	0.4	
Total	**472**	**99.8**	**100.1**

TABLE 2
Winter Site assemblage

Material	Artifacts	Ret. Fl.	Cores	Debitage	Total
Onondaga	25	14	3	341	383
Local chert			6	33	39
Other chert	2	1		27	30
Quartz	1	1	1	8	11
Quartzite				2	2

TABLE 3
Winter Site raw material frequencies

Site Lamoka points (Fig. 5:c). Three of these points display the outline, cross-section, thick unfinished base and crudeness of flaking of classic Lamoka points. The fourth (Fig. 5:b) is wider and relatively flatter, but falls within the ranges described and illustrated by Ritchie, and its thick unfinished base is diagnostic. With a thinned base, this point could be considered a Brewerton side-notched point (Ritchie 1961) or an Innes point (Lennox 1986). A similar overlap between Lamoka and Brewerton side-notched types was noted at the McIntyre Site (Johnston 1984). All four points are made of Onondaga chert and are described in Table 4.

There are also two mid-sections of projectile point blades of Onondaga chert. The maximum widths and thicknesses are 20 and 7 mm and 22 and 8 mm, respectively. While it is not possible to classify these fragments, they fall within the morphological and metrical ranges of Lamoka points.

There is a large, thick and crudely flaked fragment of an expanding-stemmed biface, with an unretouched base like those of Lamoka points. The length of the fragment is 42 mm, the shoulder width 24 mm and the thickness 14 mm. The object is broken at roughly its mid-point and there are a few small flake scars on the fractured surface which might be accidental. This artifact might be a "juvenile" attempt at biface manufacture (Fig. 6:d).

There are three small fragments of unidentifiable bifacially worked objects, two made of Onondaga chert, and one of clear quartz.

There are three objects interpreted as drill fragments, two bases and one fragment from near the tip. All have relatively thick, narrow, triangular-to-diamond-shaped cross sections. One of the bases is convex, and the other is an unretouched fracture scar resembling the base of a Lamoka point (Fig. 6:b).

Two fragmentary artifacts of Onondaga chert display areas of steep scraper retouch on one edge. One is entirely unifacial and the other has bifacial edge retouch.

Nine artifacts are classified as wedges: flakes of trianguloid or rectanguloid shape, displaying bifacial crushing on opposite edges. Three fragmentary specimens were classed as wedges by their morphological and metrical similarities to complete specimens. Some attributes of the six complete specimens are listed in Table 5.

Three flakes of Onondaga chert have been retouched to produce graver spurs on one edge (Fig. 6:a). Two were made on small, irregular flakes with the graver spur shaped by edge retouching along one edge of the spur. The third is a thick narrow flake fragment with an edge-retouched graver spur at one end.

An artifact identified as a spokeshave (Fig. 6:c; Fig. 7) is a thick cortical flake of coarse-grained, pinkish chert, measuring 24 mm by 30 mm by 6 mm thick. In one of the longer edges a notch, 10 mm wide and 3 mm deep, has been cut by edge retouching onto the dorsal surface. On the unflaked ventral surface around the margin of the notch is a thin band of clear, thick, probably organic residue, in which tiny carbonized fragments are embedded (Fig. 7:b). The amount of the residue is too small to permit chemical identification, but I speculate that it consists of plant sap and other wood debris resulting from the use of the spokeshave to whittle sticks.

Sixteen flakes have regular unifacial retouch on one edge. Fourteen of these are on Onondaga chert, one on other chert, and one on quartz.

Most of the ten core or nodule fragments are fractured remnants of chert pebbles. One core fragment of Onondaga chert is a tabular fragment retaining part of a facetted striking platform, and is probably a rejuvenation flake. A second specimen of note is a small bipolar core fragment of Onondaga chert.

The debitage consists of 334 unmodified waste flakes and 78 irregular pieces of shatter. Raw material frequencies are included in Table 3.

There are two small fragments of ground stone, one of slate and one of schist, that bear small ground facets and may be fragments of ground stone tools.

Only two small fragments of calcined bone, both from small mammals, were recovered, one from the plough zone and one from Feature 3.

Artifact distributions

Fig. 8 shows the density of artifacts recovered in the one-square-metre units. Densities are highest in the vicinity of features and there may be two overlapping concentrations of material associated with two feature clusters: one near the west end of the excavated area and one near the east end. The excavation may therefore have intersected two adjacent habitation or activity areas. Fig. 9 shows the occurrence, within the squares, of lithic artifacts by class. Scrapers, drills and the spokeshave are all restricted to 'he east concentration. However, the small size of the sample makes any inferences suspect. Chipping detritus and cores were distributed throughout the excavated area.

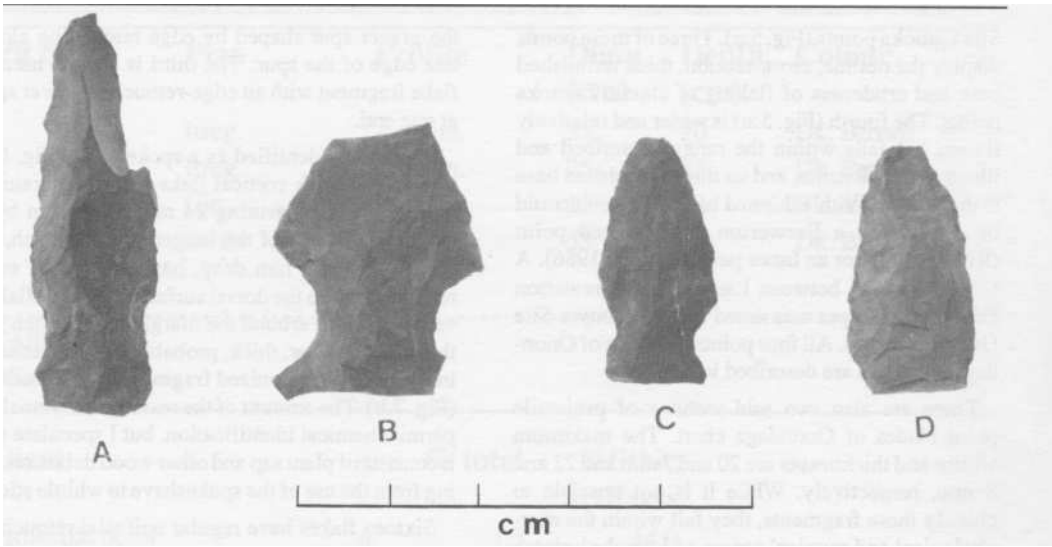

FIGURE 5

Winter Site projectile points. a: Lamoka Point (cat. no. 2); b: Side-notched point (cat. no. 5); c: Lamoka Point (cat. no. 1); d: Lamoka Point blank (cat. no. 51).

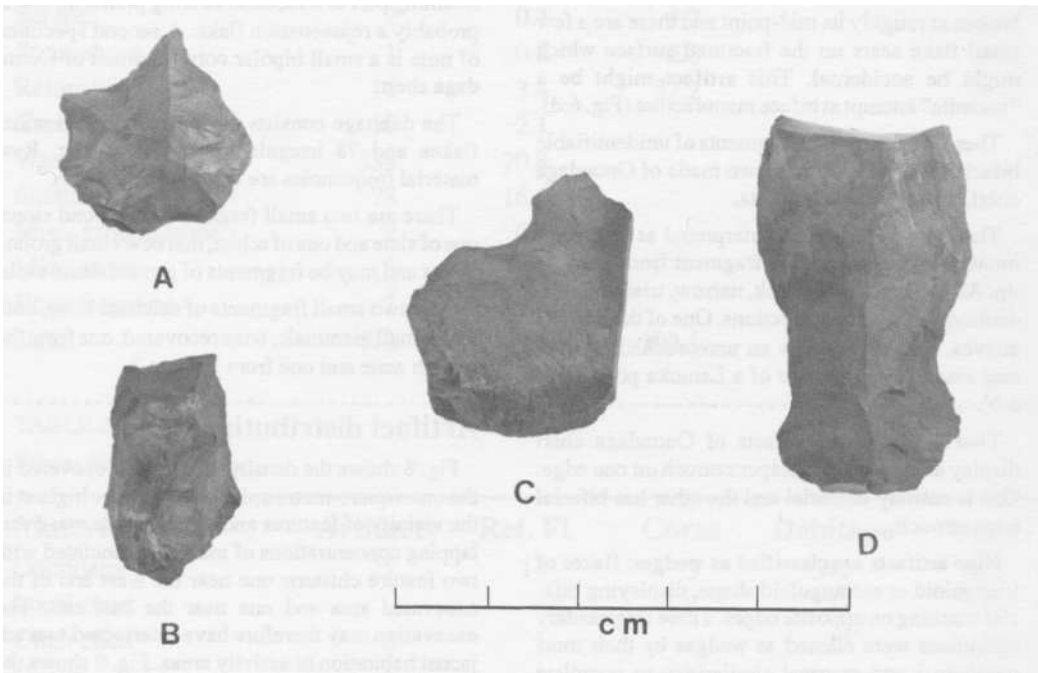

FIGURE 6

Winter Site chipped stone artifacts . a flake graver (cat. no. 77); b: drill base (cat. no. 6); c: spokeshave (cat. no. 23); d: stemmed biface (cat. no. 48).

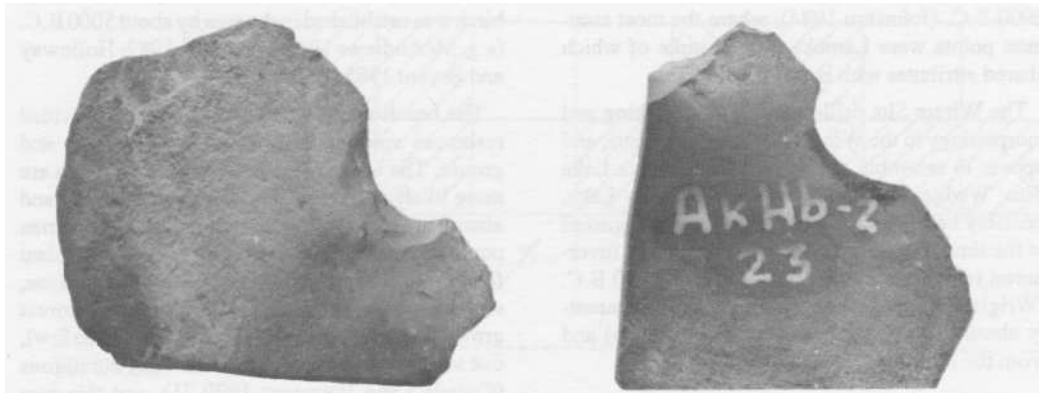

FIGURE 7
Spokeshave. Left: dorsal view. Right: Ventral view

Cat. No.	1	2	5	51
Length (mm)	22	44	>30	23
Shoulder w.	13	14	23	(max.W)15
Max. Th.	6	8	7	6
Stem L.	10	13	14	NA
Base W.	11	12	>18	11
Base Th.	4	5	5	4
Min. Stem W.	9	11	13	NA

TABLE 4
Winter Site Lamoka points.

Cat. No.	L (mm)	W	Th	Shape	Location of use
10	17	13	6	Rect.	sides
20	13	12	4	Tri.	ends
55	38	34	12	Rect.	ends
56	16	13	5	Rect.	ends
59	21	14	6	Tri.	sides
66	20	13	7	Rect.	sides

TABLE 5
Winter Site wedges.

Interpretations: Artifact comparisons

The Lamoka points, and the bifaces resembling them, conform in metrics and morphology to artifacts recovered from the Lamoka Lake type site (Ritchie 1932), and suggest a cultural similarity and contemporaneity to the Lamoka culture of central and western New York, dated to ca. 2500 B.C. (Ritchie 1969). At least one of the points also has similarities to Brewerton, Innes and other Late Archaic point forms of the lower Great Lakes area. In this respect the assemblage of points resembles that from the McIntyre site, dating to approximately

2000 B.C. (Johnston 1984), where the most common points were Lamoka points, some of which shared attributes with Brewerton points.

The Winter Site drills are similar in flaking and morphology to the Winter Site Lamoka points, and appear to resemble some from the Lamoka Lake Site. Wedges were not noted at Lamoka Lake, possibly because they were simply not recognized at the time, but they do occur at sites in the Inverhuron region dating between 1700 and 1000 B.C. (Wright 1966; Ramsden 1976). They are apparently absent from the Innes Site (Lennox 1986) and from the McIntyre Site (Johnston 1984).

Interpretations: features and settlement

The distribution of features and cultural material within the excavation units at the Winter Site suggests the existence of two habitations or activity areas. The centres of the two concentrations appear to be about six metres apart, separated by a sterile area one or two metres wide, giving each area of concentration a hypothetical radius of about two metres. While this is far less than that proposed for structures at the Innes Site (Lennox 1986), it is more in keeping with the probable size of single-family tents used by Archaic hunting and gathering groups in the Northeast (cf. Woodley 1988). A similar pattern of sub-plough zone features and a few post molds was also encountered at McIntyre (Johnston 1984).

Interpretations: site environment and catchment

As a result of extensive cultivation in this region for the past century and a half, the prehistoric environment of the Winter Site is difficult to reconstruct. However, a general picture can be put together on the basis of topography and soil types. Soils on the tops and on some of the drumlin slopes are generally well-drained loams or sandy loams, while soils in the lower-lying areas between the drumlins are less well-drained barns or mucks (Hoffman, Matthews and Wicklund 1963). The well-drained uplands probably supported a climax hardwood forest of beech and sugar maple, while the soils between the drumlins would probably have supported elm, cedar and willow, with cedar swamps (Hoffman, Matthews and Wicklund 1963:14). Pollen diagrams from nearby parts of southwestern Ontario indicate that a mixed deciduous forest of beech, maple, hemlock and birch was established in the area by about 5000 B.C. (e.g. McAndrews 1981; Anderson 1982; Holloway and Bryant 1985; Bennett 1987).

The beech-maple uplands would have provided resources such as nuts, squirrels, raccoons, and grouse. The lower areas between the drumlins are more likely to have produced a greater variety and abundance of resources that would support a human population. From spring until fall, edible plant foods would have been available in marshy areas, stream edges and areas of non-climax forest growth. The area does not support wild waterfowl, due to unsuitable topography and water conditions (Canada Land Inventory 1970-71), and this was probably the case in the past. The entire area supports deer today, because most of the area has been cleared for agriculture in the past one hundred and fifty years. Ideal habitats for deer in this area in the past were cedar swamps, forest edges, stream banks and non-climax forest areas (Banfield 1974). The low areas between drumlins and areas of steep slope and shallow soils would have provided such habitats.

Fig. 10 shows the distribution of predicted deer habitats in the vicinity of the Winter Site: these include poorly drained soils, streams, steep slopes and shallow soils. The site had convenient access to extensive areas of deer habitat, particularly to the west, the northeast and the southeast, within the distance of an hour's walk. This suggests that access to deer habitat was a factor in the site's location and that deer hunting was one of the primary activities at the site.

The Winter Site's location may be analogous to that of the Lamoka Lake Site itself (Ritchie 1938). The latter is located on a low flat area beside a small stream which connects two lakes within easy walking distance of the site. These lakes provided fish and other aquatic resources and also extensive habitat for deer around their margins. Faunal remains from Lamoka Lake indicate that deer were intensively exploited by the site's inhabitants (Ritchie 1969:57). Both Winter and Lamoka Lake are located close to two or more extensive deer habitats which would have provided alternative hunting areas to maximize the chances of success and to avoid over-hunting or adverse conditioning of the deer.

Deer was the most common species found at the McIntyre Site (Naylor and Savage 1984). McAndrews (1984) has noted a sudden disease-induced decline in hemlock in southern Ontario around 4000 B.P.; this may have occurred in the

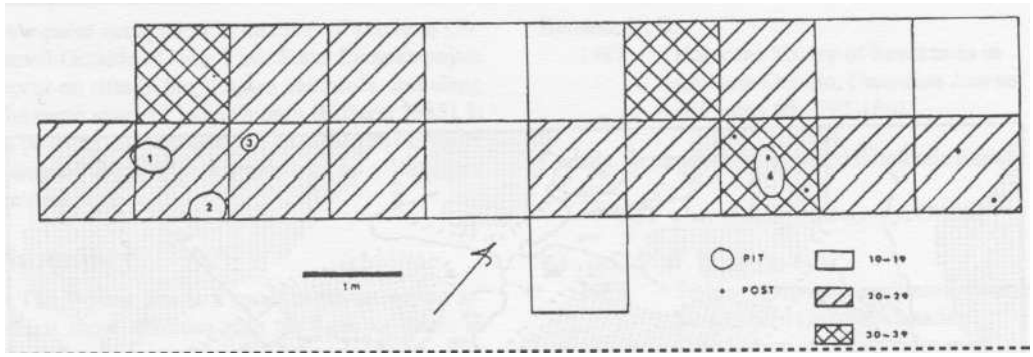

FIGURE 8
Density of objects per one m square.

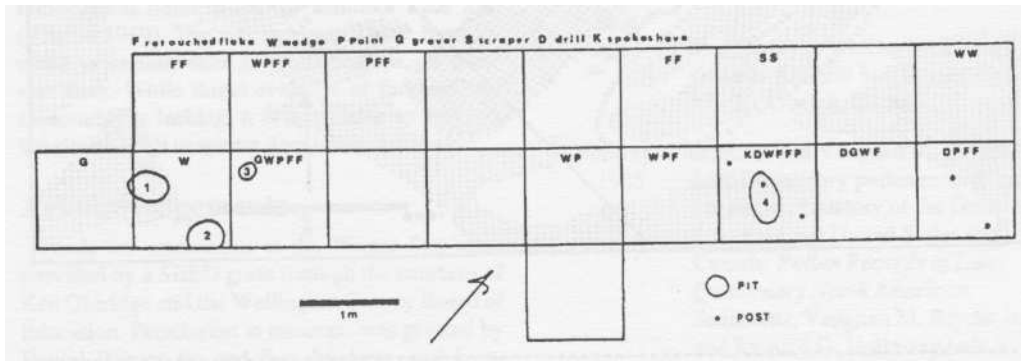

FIGURE 9
Distribution of artifact classes by one m square.

Winter Site area as early as 5000 B .P. (McAndrews 1981:326; Bennett 1987:1798). He suggests that the replacement of hemlock by new saplings of birch, beech and maple would have expanded the habitat suitable for deer in southern Ontario. While such a succession may have made the low-lying areas around the Winter Site even more attractive to deer than they are at present, it does not seem likely that it significantly expanded the areas of deer habitat, inasmuch as hemlock is more likely to have been found in the low-lying areas than in the well-drained uplands (Hosie 1969). McAndrews (1981) also suggests-that a general increase in deer habitat in parts of southern Ontario caused a movement of Late Archaic peoples out of areas that had always been well-stocked with deer and into areas that had previously been less suitable for intensive deer exploitation. This may be the reason for the occupation of the Winter Site, whose closest ties appear to be to the Lamoka culture in central and western New York.

The period between 5000 and 4000 B.P. represents the Holocene thermal maximum with warm and very moist conditions in this area (Edwards and Fritz 1988). The appearance at this time of a culture with affiliations to the southeast may be related to climatic factors which are not reflected in the pollen record.

Interpretations: site function and seasonality

The absence of identifiable animal and plant remains renders speculative the attribution of function and seasonality to the Winter Site. The area would probably have provided resources at any time during the year, but the availability of plant resources during the summer and fall would have made these the times of greatest overall abundance. However, this is probably true for almost any locality and people, after all, must live somewhere at other times.

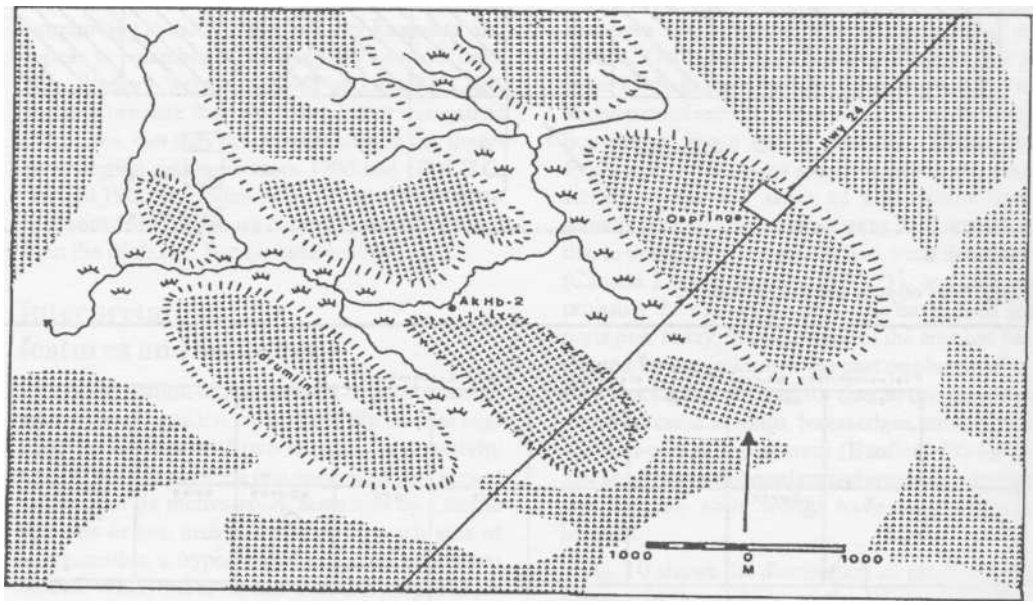

FIGURE 10
Predicted distribution of preferred deer habitat (unshaded areas) in the vicinity of the Winter Site.

Evidence for a preoccupation with deer exploitation includes the site's location and the relative abundance of projectile points. At the Late Archaic Rocky Ridge Site (Ramsden 1976), spring and summer occupations lacked projectile points almost completely, and did not yield faunal evidence for intensive deer hunting. Almost all the projectile points came instead from a small area in one stratum interpreted, on other grounds as well, as a winter camp. Therefore I suggest that the Winter Site represents a late fall and winter occupation.

The site's situation on the low flood plain of a stream would have provided shelter from autumn and winter weather. On the other hand, the swampy nature of the valley would have made it unpleasant as a warm weather camping area.

The evidence of features and post molds is inconclusive. We really have no idea what seasonal variations there may have been in Late Archaic dwellings, or what archaeological traces any of these may have left. While we may expect a winter dwelling to have been fairly substantial, and therefore to have left substantial evidence, the most effective and efficient foundation for a winter house may have been made of snow, and this would have left virtually no trace at all (Ramsden 1984).

In light of this wealth of negative evidence regarding site function and seasonality, I believe the best guess is that the Winter Site is a late fall or winter camp situated to exploit a large resident deer population. The presence of at least two, and reportedly three or more, large soil discolourations such as the one we tested, suggests that the site was visited repeatedly over a number of years. Moreover, a reported second site a couple of kilometres away, whose surface indications sound strikingly similar, suggests that the Winter Site is not anomalous, but representative of an exploitative pattern.

A question which only further survey and excavation can address is: were the Winter Site people seasonal visitors, or was there a year-round Nar-

row-point occupation in this part of southern Ontario? Outside of New York State, Lamoka points occur on sites in the Niagara peninsula, and along the north shore of Lake Ontario (Roberts 1985). It is possible that the Winter Site is the fall or winter camp of a group that summered in a lakeshore environment.

Summary

The Winter Site is a small campsite whose artifacts show affinities with the Lamoka Phase in central and western New York State and with other Narrow-point occurrences in southern Ontario. Thus a Late Archaic date of about 2500 B.C. for the site's occupation is reasonable on the basis of radiocarbon dates from the Lamoka Late Site (Ritchie 1969). The site appears to have been located to exploit deer as well, perhaps, as other resources. While direct evidence of function and seasonality is lacking, it is reasonable to interpret the site as a fall to winter deer hunting situation.

Acknowledgements

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